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Septobasidium saurauiae sp. nov. (*Septobasidiaceae*) and *S. pseudopedicellatum* new to China

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Abstract—A new species, *Septobasidium saurauiae* on *Saurauia tristyla* associated with *Chionaspis* sp., and a new Chinese record, *Septobasidium pseudopedicellatum* on *Schefflera octophylla* and *Psychotria serpens*, are described. They were collected from Hainan Province.

Key words—*Pucciniomycetes*, *Septobasidiales*, taxonomy

Hainan Island is located in the South China Sea. It is a tropical area with a rich fungal diversity. To date, six new species and one new Chinese record of *Septobasidium* have been discovered from this Province (Chen & Guo 2011b, Lu & Guo 2009a, 2010b,c). An additional new species and a new Chinese record of *Septobasidium* are reported as follows:

Septobasidium saurauiae S.Z. Chen & L. Guo, **sp. nov.** Figs. 1–7

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Basidiomata resupinata, discontinue crescentia, 6–7 cm longa, 3–4 cm lata, cinnamomeo-brunnea vel griseo-brunnea, margine determinata, superficie laevia, saepe protuberationibus rotundis praedita, in sectione 900–1330 µm crassa. Subiculum brunneum, 30–50 µm crassum, ab subiculo stratum hypharum vel curtam columnam formans. Columnae brunneae, 20–50 µm altae, 20–70 µm latae. Strata hyphararum 780–970 µm alta. Ab strato hymenii hyphae saepe repullulantes tum stratum hypharum et hymenium secundum formantes. Stratum hypharum secundum 200–240 µm altum. Hymenium hyalinum, 40–50 µm crassum. Basidia cylindrica, recta vel leviter curvata, 4-cellularia, 42–50 × 6–8 µm, hyalina. Sine probasidio. Basidiosporae 10–25 × 4–6 µm, hyalinae. Haustoria hyalina, ex hyphis irregulariter spiralibus constantia.

Type: China, Hainan Province, Limu Mountain, alt. 529 m, on *Saurauia tristyla* DC. (*Actinidiaceae*), associated with *Chionaspis* sp. (*Diaspididae*), 23.XI.2010, Y.F. Zhu & F. He 520 (**holotype**, HMAS 263145).

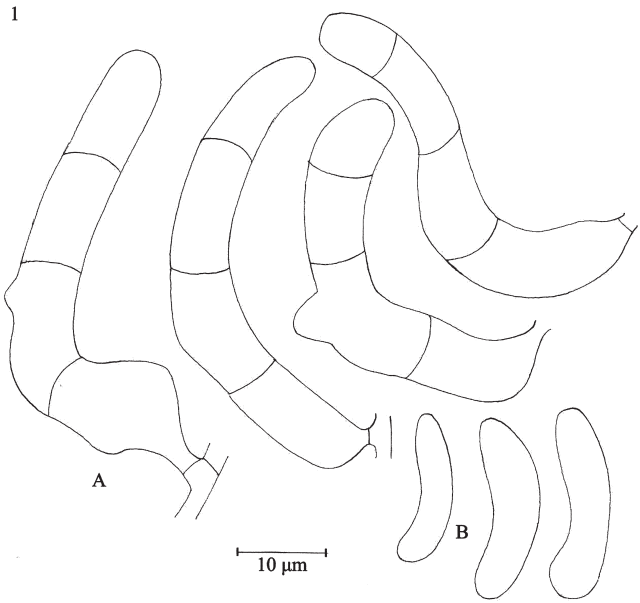
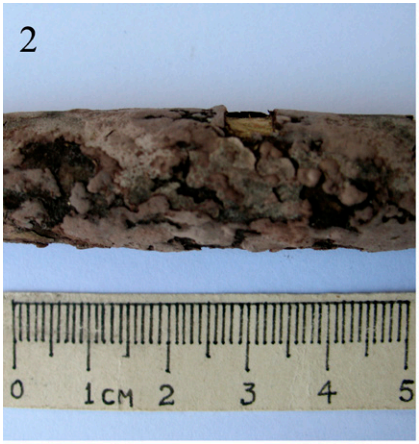


Fig. 1. Basidia and basidiospores of *Septobasidium saurauiae* (HMAS 263145, holotype).

Basidiomata on branches, resupinate, growing discontinuously, 6–7 cm long, 3–4 cm wide, cinnamon-brown or grey-brown; margin determinate, surface smooth, frequently with round protuberance. In section 900–1330 μm thick. Subiculum brown, 30–50 μm thick. Forming hyphal layer or short pillars. Pillars brown, 20–50 μm high, 20–70 μm wide. Hyphal layer 780–970 μm high. From hymenial layer the fungal hyphae often renew growth to form the second hyphal layer and hymenium. Second hyphal layer 200–240 μm high. Hymenium hyaline, 40–50 μm thick. Basidia arising directly from the hyphae without a probasidial cell, at first obovoid, later cylindrical, straight or slightly curved, 4-celled, 42–50 × 6–8 μm, hyaline. Basidiospores 10–25 × 4–6 μm, hyaline. Haustoria hyaline, consisting of irregularly coiled hyphae.

Remarks: Morphologically, *Septobasidium saurauiae* is similar to *S. meizhouense* C.X. Lu et al., which differs in numerous cracks in the basidioma surface and a thinner section (400–650 μm high) and hyphal layer (220–440 μm high) (Lu et al. 2010).

Figs. 2–7 (right). *Septobasidium saurauiae* (HMAS 263145, holotype). 2. Basidiomata on branch. 3–4. Sections of basidiomata. 5–6. Basidia (arrows). 7. Haustoria.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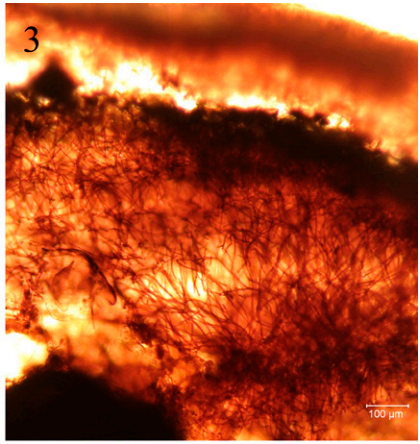
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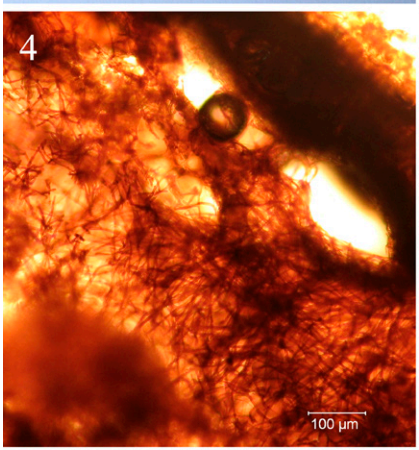
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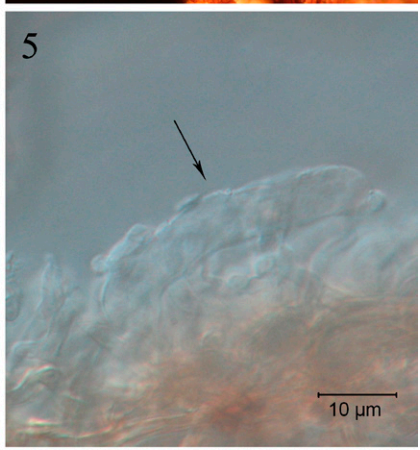
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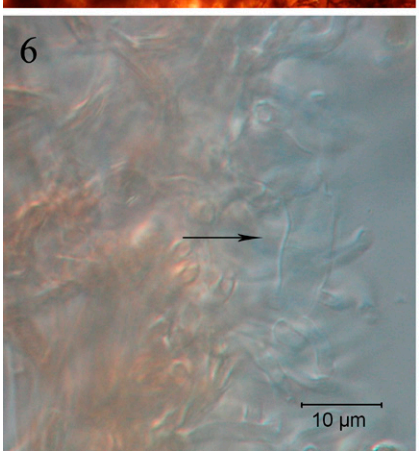
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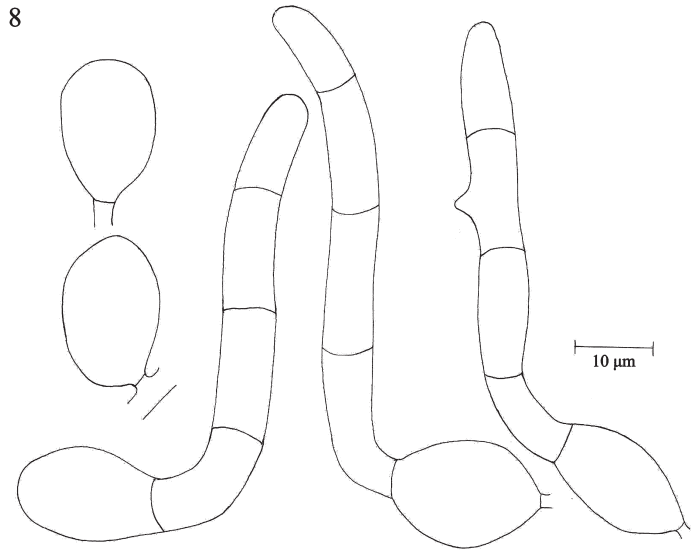


Fig. 8. Basidia and probasidia of *Septobasidium pseudopedicellatum* (HMAS 242745).

Septobasidium pseudopedicellatum Burt, Ann. Mo. bot. Gdn 3: 327, 1916.

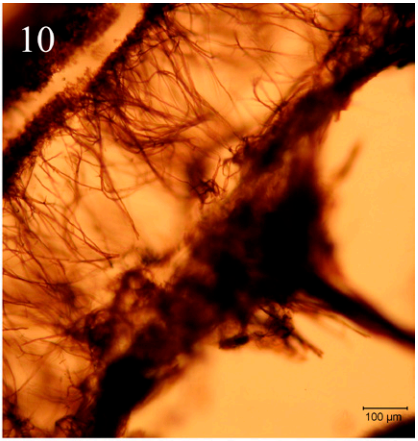
Figs. 8–14

Basidiomata on trunks, branches and leaves, resupinate, 0.3–19 cm long, 0.2–9 cm wide, chestnut brown, brown or smoke grey; margin white, determinate, surface smooth. The pillars near the margin are visible with naked eyes. In section 850–1700 μm thick. Subiculum white or brown, 30–50 μm thick. Pillars brown, 500–700 μm high, 50–170 μm wide. The pillars branch out to form hyphal layer, 400–650 μm high. From hymenial layer the fungal hyphae often renew growth to form the second hyphal layer and hymenium, up to 3-strata. Hymenium brown, 40–60 μm thick, with closely packed paraphyses that are parallel, upright and curved at top. Probasidia hyaline or brownish, obovoid or ellipsoidal, 16–20 × 10–16 μm. Basidia cylindrical, straight or slightly curved, 4-celled, 52–62 × 5–7.5 μm, hyaline, with persisting probasidial cell. Sterigmata conical, 2.5–8 × 2.5–3.5 μm. Basidiospores not seen. Haustoria consisting of irregularly coiled hyphae.

Specimens examined: **CHINA**, Hainan Province, Bawangling Natural Reserve, Nanchahe, alt. 600 m, on *Schefflera octophylla* (Lour.) Harms (*Araliaceae*), 14.IV.2011, L.Guo 11611, HMAS 242745; on *Psychotria serpens* L. (*Rubiaceae*), 14.IV.2011, L.Guo 11612, HMAS 251216.

Figs. 9–14 (right). *Septobasidium pseudopedicellatum* (HMAS 242745). 9. Basidiomata on trunk. 10–11. Sections of basidiomata. 12. Probasidia (arrows). 13. Basidium (arrow). 14. Haustoria.

9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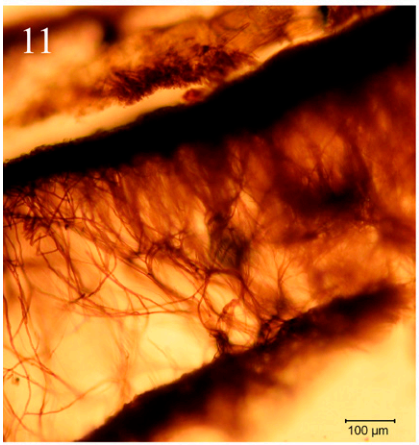
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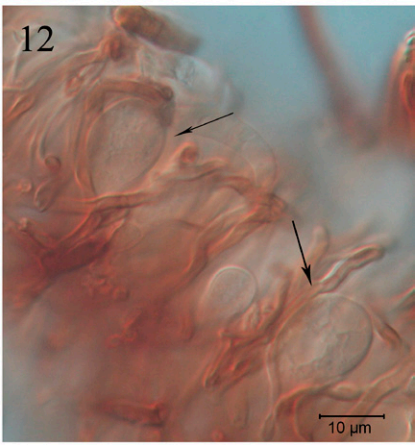
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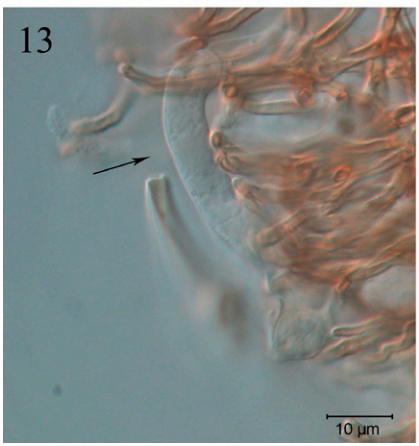
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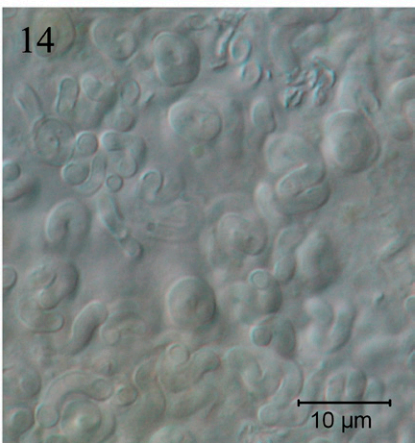
14
10 µm

Including the two species reported in this paper, 35 *Septobasidium* species have now been reported in China (Sawada 1933, Couch 1938, Teng 1963, Tai 1979, Kirschner & Chen 2007, Lu & Guo 2009a,b,c, 2010a,b,c, 2011, Lu et al. 2010, Chen & Guo 2011a,b).

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